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COGGESHALL ABBEY, ESSEX.

COGGESHALL is a market town, partly situated on low ground near the north side of the river Blackwater, in Essex, and partly on the acclivity of a pleasant hill rising on the same side. On this latter account it is supposed to have been named in Saxon *Loggerhall*, i. e., Sunny Bank, and in the old deeds, *Sunnendon*. It is forty-four miles from London and ten from Colchester.

According to one authority Coggeshall owes its existence to the abbey, whose foundation attracted towards it a number of dependants and inhabitants: but some antiquaries suppose it to have been of Roman origin, and Mr. Drake argues strongly in favour of its being the *Canonium* of Antoninus. Its distance, he observes, exactly answers to the numbers of the Itinerary, which places Canonium between Camulodunum and Caesarmagus: the latter he supposes to be Dunmow, from which a military way runs in a direct line to Colchester. The opinion that Coggeshall is identical with the station Canonium, he endeavours to corroborate by mentioning some Roman coins and other antiquities, that have been found in this vicinity. Among the latter was an "arched vault of bricks, and therein a burning lampe of glasse, covered with a Roman tyle some fourteen inches square, and one urn with ashes and bones; besides two sacrificing dishes of polished red earth, having the bottom of one of them with faire Roman letters, inscribed COCCILI M." This inscription is supposed by Mr. Burton to be intended for "*Coccili Manibus*;" i. e., to the Manes of Coccilus. Others affirm it to be only a potter's mark found on many vessels that have been

dug up in England and elsewhere. In a place called Westfield, belonging to the abbey, and situated about three-quarters of a mile from Coggeshall, was also found, says Weever, "by touching with a plough, a great brazen pot. The ploughman supposing it to have been hid treasure, sent for the abbot to see it taken up. The mouth of the pot was closed with a white substance like paste or clay, as hard as burnt brick; and when that was removed, another pot inclosed a third, which would hold about a gallon; and this was covered with a velvet-like substance, fastened with a silken lace; within this were found whole bones, and many pieces of small bones, wrapped up in fine silk of fresh colour, which the abbot took for the relics of some saint, and laid up in his vestuary; but it was more probably a Roman urn." This and the former discovery seem certainly insufficient to prove that Coggeshall is the actual site of a Roman station; although some think they afford evidence of its having been a Roman villa.

In the reign of Edward the Confessor this lordship belonged to Colo, a Saxon; but at the time of the Domesday survey it was held by Eustace, earl of Boulogne, whose heiress, Maud, conveyed it to the crown by her marriage with Stephen, earl of Blois, afterwards king of England. In the year 1142 Stephen and his queen founded an abbey here, near the river, for Cistercian or white monks; and having dedicated it to the Virgin Mary, endowed it with this and other manors. In 1203 King John granted the abbot and his convent permission to inclose and impark their wood at Cogges-

hall; and in 1247 they obtained a license from King Henry the Third to inclose and impark extensive woodlands in Tolleshunt, Inworth, and other places: the king also invested them with the privileges of holding a market weekly, and an eight days' annual fair. This monastery was largely endowed by succeeding benefactors; and a chantry was founded in the church to pray daily for King Edward the Third, Philippa his queen, and their children; for which the sovereign, on the 11th of January, 1344, made them a grant of a hogshead of red wine, to be delivered in London by the king's gentlemen of the wine-cellar, every year at Easter. A second chantry was founded here in 1407, by Joan de Bohun, countess of Hereford, and others, who bestowed some valuable estates upon the monks for its support. On the surrender of the abbey, 5th of February, 1538, its annual revenues were, according to Speed, valued at 298*l.* 8*s.* In the same year Henry the Eighth granted the manor of Coggeshall and other estates to Sir Thomas Seymour, brother of Edward, duke of Somerset, who in 1541 exchanged them with the king. Since that period this manor has been divided, and passed through various families. Only a small part of the abbey is now remaining; near it is a bridge of three arches, originally built by King Stephen, over a channel that was cut to convey the water of the river nearer to the abbey.

ANECDOTE OF AN AMERICAN INDIAN.

A FEW years ago, a Pawnee warrior, son of "Old Knife," knowing that his tribe, according to their custom, were going to torture a Pawnee woman whom they had taken in war, resolutely determined, at all hazards, to rescue her from so cruel a fate. The poor creature, far from her family and tribe, and surrounded only by the eager attitudes and anxious faces of her enemies, had been actually fastened to the stake, her funeral pile was about to be kindled, and every eye was mercilessly directed upon her, when the young chieftain, mounted on one horse, and according to the habit of his country leading another, was seen approaching the ceremony at full gallop. To the astonishment of every one, he rode straight up to the pile, extricated the victim from the stake, threw her on the loose horse, and then vaulting on the back of the other, he carried her off in triumph!

She is won! we are gone,—over bank, bush, and scuir:

"They'll have fleet sto ds that follow," quoth young Lochinvar.

The deed, however, was so sudden and unexpected, and being mysterious, it was at the moment so generally considered as nothing less than the act of the Great Spirit, that no efforts were made to resist it, and the captive, after three days' travelling, was thus safely transported to her nation, and to her friends. On the return of her liberator to his own people, no censure was passed upon his extraordinary conduct—it was allowed to pass unnoticed.

On the publication of this glorious love-story at Washington, the boarding-school girls of Miss White's seminary were so sensibly touched by it, that they very prettily subscribed to purchase a silver medal, bearing a suitable inscription, which they presented to the young Red-skin as a token of the admiration of *White-skins* at the chivalrous act he had performed, in having rescued one of their sex from so unnatural a fate. Their address closed as follows:—

"Brother! accept this token of our esteem; always wear it for our sakes: and when again you have the power to save a poor woman from death, think of this, and of us, and fly to her relief."

The young Pawnee had been unconscious of his merit, but he was not ungrateful. "Brothers and sisters!" he exclaimed, extending towards them the medal which had been hanging on his naked breast, "this will give me ease more than I ever had, and I will listen more than I ever did to white men."

"I am glad that my brothers and sisters have heard of the good act I have done. My brothers and sisters think that I did it in ignorance; but I now know what I have done."

"I did it in ignorance, and did not know that I did good; but by giving me this medal I know it!"—*Quarterly Review.*

THE BRANDY PEST.

No. IV.

The Visit.

WE had listened to Justine's narration with deep emotion; we all surrounded the good child, pressed her in our arms, and tried to comfort her by the assurance of our love. Justine was right; if her father had been able to foresee the consequences of his habit of drinking spirits, he would certainly have shunned the snare. And how many people are still living, who, with the brandy-glass in their hand, smile carelessly at the slowly-approaching ruin of their body, of their mind, and of their whole family.

I consulted my wife, and we determined to take care of Justine, whatever might happen. We could easily perceive that her heart was still attached to the playmate of her youth, although without hope. But the question was whether Fridolin Walter was still thinking of the poor deserted Justine, or whether he was already married, and whether he still lived in his native home, or had returned to England? Nay, we did not even know whether he was still alive. I repented having neglected my correspondence with him, and I resolved to undertake a journey in order to see him, and to ascertain his circumstances. Justine was not to be informed of what I was about to do. I seated myself in my carriage, and left home, and the next day reached the native village of Fridolin and Justine.

It was a fine summer's evening, and the people were still working in the fields. I left the carriage at a little distance from the village, and walked thither on foot, in order to satisfy my impatient curiosity by inquiry. I met a ragged peasant, who stood leaning on a dung-fork, staring idly about him. Upon my inquiring whether Dr. Walter still lived in the village, the pale-faced fellow looked at me stupidly for a while, repeated my question slowly, and added, "Yes, sir, the devil has not yet carried away the people-flayer." I was somewhat shocked at this answer, and continued my questions; but I got nothing but still more confused, and less agreeable news of the doctor. I was extremely sorry for it. How could Fridolin possibly have changed in so few years? and yet I had often seen similar changes in mankind. Poor Justine! thought I. I went on, and on the way joined an old woman, with a basket on her head. At the repetition of my question about Fridolin, she said, "You mean our mayor? Certainly, he is at home."

"Is he your mayor? Is he liked by the people?"

"To be sure," replied the old woman, "he is a very worthy and a wise man, and has done a great deal of good to our village."

This encouraged me again. I learned now from my talkative companion that Dr. Walter lived in the house of his mother, that he was unmarried, that he possessed a large fortune, that he assisted many poor families, that he was a true friend to the widow and the orphan, and that he therefore enjoyed the universal esteem of the neighbourhood, and had been chosen member of the Great Council of the Canton; but that he refused the office, because he would not be separated from his patients. At the entrance of the village she showed me one of the most beautiful houses on the right hand side of the road, in the midst of a garden, and said it was the mayor's house. I entered without ceremony.

An old lady, distinguished by manners full of dignity, received me in the hall: she was Fridolin's mother. She conducted me to her son, who was sitting at his writing-desk, but came towards me, and soon recognised me. He received me cordially. I allowed him to suppose that I had availed myself of a journey on business to renew our old acquaintance; and both he and his mother insisted upon my spending a few days with them. My luggage was then fetched from the inn.

Fridolin was still the same hale, vigorous man; but melancholy was not yet quite banished from his features. "I divert myself as well as I can," said he, "and I have opportunity enough to do so, for I have plenty of occupation."

"And Justine?" asked I.

He shrugged his shoulders; but said quietly, in an almost indifferent tone, "I know not where she may be. She took too much to heart the death of her father, who, after having deceived widows and orphans, as well as his best friends, committed suicide. Not half his debts could be paid out of the money he left behind him, so the house and ground were sold; but the accursed house was soon afterwards destroyed by fire. All my inquiries, all the

advertisements in the newspapers, were in vain. I heard, but too late, uncertain news that a young lady was seen, about the time of Justine's departure, travelling towards the Lake of Constance; but there every further trace was lost. I would certainly have assisted the poor girl in her despair."

"Often there happens what we do not dare to hope for!" said I. "Perhaps a lucky chance may discover to us the place of her retreat. In the mean time, dear doctor, I am delighted to find you in better spirits than you were at our first meeting. You must own that time is a good doctor. Your mother, too, appears consoled, and even more cheerful than yourself."

"Yes," said Fridolin, "but on my arrival, I found her dangerously ill in bed, and had every reason to fear I should lose her too. The sudden death of my father—he was found one morning dead in his bed, having been struck by apoplexy, and the discovery that he had been carried away so early from life by his own fault—he was only fifty years of age—all this had brought my mother to the brink of the grave."

I looked somewhat astonished at the doctor: "Apoplexy, and his own fault, you say? Dare I ask you what you mean by that?"

Fridolin answered, "Unfortunately he shared the common vice of our days. Do you remember our conversation during our journey?"

"I have not yet forgotten it," answered I, "for since then I have become a very moderate wine-drinker, but a very strong water-drinker, and I have taken leave of all spirits. Therefore, thanks to you, I am now well, and will endeavour to remain so."

"Oh, if my good father had done like you, he would still be living!" said Fridolin, with sad earnestness. And then he related to me the particulars of his father's fate.

Another Narration.

FRIDOLIN's father, as the doctor said, had always been a respectable, honest man: he had always liked, it is true, a glass of good wine in good company; but not beyond measure. He was never seen drunk, but sometimes what we call "wine warm." He seldom took brandy or other strong liquors.

The honest man would perhaps have continued this manner of life a long time, though not with the best advantage to his health. A moderate use of wine at dinner refreshes and strengthens, if it is not used like water for quenching the thirst. But Fridolin's father shared the fate of many other people; they drink, and do not know when they have too much, and forget themselves. He was every day flushed with wine, so that, after a few years, his health was much affected. He became indisposed to work, his face became pale, his features heavy; he lost his former good humour, and complained of restless nights: he attributed this to his becoming older. Mrs. Walter thought it was the consequence of his labours, and the vexations united with them. She herself offered him sometimes an extra glass of wine, in order to refresh him. This was poison to him. He became more accustomed to it. He was in good humour as long as his blood and his nerves were excited by the wine; but afterwards he always sunk back into his former state of uneasiness.

"My mother became at last very nervous," said Fridolin, "as she feared he was ill, and caused the physician to be fetched. My father laughed. He was certainly not ill, if we take the word ill in its common meaning; but death was already stealing upon him. The physician prescribed to him to drink water. My mother watched anxiously the progress of the case. My father renounced wine, even in the evening parties, to please her; yet his health did not improve. He became rather more morose, more sleepy, and complained of headache, and heaviness in his limbs; he worked notwithstanding, and frequently took bodily exercise. One morning he died in an apoplectic fit. After his death, many empty brandy bottles were found in his buffet. He had drunk secretly, probably to procure for himself sleep at night. His death, however, proved to be the greatest blessing to this place, and some neighbouring villages."

"What!" cried I, astonished; "a blessing? how is this possible? you excite my curiosity."

Fridolin answered: "The suicide of old Thaly, and the death of my good father, which succeeded that event, being the effect of drinking, were a great warning for the people,

who became really more moderate; and the example of our village soon produced a beneficial influence upon some other villages of the neighbourhood. We formed a Temperance Society, from which—"

"Stop!" cried I, interrupting him, "is this Society still in existence? This is most important for me to know, is it still in existence, or—"

"Certainly, it is still in existence," answered the doctor, "and has been for nearly two years. We have only about nine hundred inhabitants in this village, and eight hundred and sixty of them belong already to our Society."

"How is that?" asked I, laughing, "do your girls and women, and even your children, belong to your Temperance Society, that you count nearly the whole population?"

The doctor looked at me with amazement, and said, "Certainly: how is it possible to form such a Society,—how could it have a salutary influence,—without the women and children? The influence of the female sex upon men, in promoting a moderate, sober life, especially upon young people and children, is very great. It is they who suffer most by the drunkenness of men. They can save from ruin, if not always the grown-up persons, at least the rising generation."

I confess this appeared to me very strange, and I said, "How have you arranged this? Relate it to me. In my native town we have tried to establish such Temperance Societies, for brandy-drinking had also increased there; but we met with such great obstacles to it that we were obliged to give up the plan."

Fridolin was just going to answer me, when his mother entered, and invited us to supper, which, in the beautiful evening, was to be taken in the summer-house. We obeyed. The doctor said to me on the way, "To-morrow we shall find an hour in which we can be alone together: then I will satisfy your curiosity. You have probably begun upon *wrong principles* the establishment of a Temperance Society, as has happened in other places."

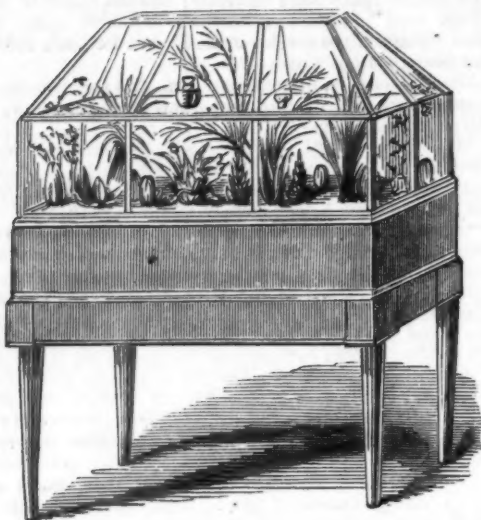
Indeed, during the whole evening, we could not find a single moment to continue our conversation. Mrs. Walter directed it to a hundred different subjects, and complained jokingly "that her son had left her in the beginning of her old age, without the friendly assistance of a young industrious daughter-in-law; and that he preferred, as it appeared, to remain a bachelor."

This was of course a chapter full of matter to talk about. I began by and bye to speak of the lovely Justine; but the icy tone in which Fridolin spoke of his former beloved one, and asked directly about other things, and the sudden silence of Mrs. Walter, whose features appeared to show to me that I had touched upon a not very pleasant subject, hindered me from proceeding. I was silent and somewhat confounded. I saw that great changes had occurred, and that the aim of my journey was not welcome. So I desisted and deferred until the morrow speaking about her to Fridolin. Oh, poor Justine!

HOWEVER the world may affect to despise the genuine Christian, it is beyond their power; they feel too sensibly the necessity of attaining that very state of feeling and disposition which is displayed in such a character, to entertain in their heart any mean or degrading opinion of the character which they apparently undervalue. Every thought which it wrung from their conscience by its unwelcome intrusion upon their contemplation, rises in judgment against their indifference—God has not permitted them to despise a true Christian; they may pass him by with a haughty and supercilious coldness; they may deride him with a taunting and sarcastic irony; but the spirit of the proudest man that ever lived will bend before the grandeur of a Christian's humility. You are at once awed, and you recoil upon your own conscience when you meet with one whose feelings are purified by the Gospel. The light of a Christian's soul, when it shines into the dark den of a worldly heart, startles and alarms the gloomy passions that are brooding within. Is this contempt? No: but all the virulence which is excited by the Christian graces can be resolved into envy, the feelings of devils when they think on the pure happiness of angels—and, to complete their confusion, what is at that moment the feeling in the Christian's heart? Pity most unfeigned pity!—WOLFE'S *Remains*.

DIRECTLY a man determines to think he is well nigh sure of bettering his condition.

INDOOR GREENHOUSES.



It will probably be a new and interesting fact to many of our readers when we tell them that it is quite possible to enjoy the luxury of growing plants, in the most confined and apparently unfavourable situations, if we inclose them in glass cases or wide-mouthed bottles, and carefully exclude the atmospheric air.

This fact was accidentally discovered in the following manner. Mr. Ward, who made a report on the subject to the British Association, in 1837, had often attempted to grow plants, especially mosses and ferns, in and about his own dwelling, but being in the neighbourhood of manufactories, and enveloped in smoke, he found all his efforts unavailing, owing to the necessity which he supposed to exist for exposing his plants more or less freely to the air. But happening on one occasion to place the chrysalis of a sphynx, buried in loose mould, in a wide-mouthed bottle securely closed, that he might observe its change into the winged state, he was surprised, about a week before the insect assumed the perfect form, to find a seedling grass and fern springing out of the mould. He found that they required no water, for the condensation of water on the internal surface of the glass kept the mould always equally moist; and he was willing to try how far the change of air within the vessel, which must naturally result from every change of temperature, might be sufficient for the purposes of vegetable life. He placed the bottle outside his window, and had the pleasure of finding that the plants grew well. The success of this trial led to a series of experiments upon plants of all structures, and belonging to a great variety of natural families, in which Mr. Ward was greatly assisted by the kindness of Messrs. Loddiges.

These experiments were conducted upon a large scale. The glass cases in which the plants were inclosed were of all sizes and shapes, from small wide-mouthed bottles, to a range of houses, about twenty-five feet in length, and ten in height. The houses were filled with rock-work, for the purpose of accommodating plants which grow best in such situations. Some of these cases were quite closed at the bottom, and when once watered required no further watering for a long period: others had several openings, and the plants were watered once in three or four weeks or months, as they seemed to require. The latter was found the most advantageous method. The glazed roof and sides of these cases were made as tight as putty and paint could effect, and the doors were made to fit closely, but in no instance were any of the cases sealed hermetically, from the almost impossible nature of the task in these instances, and from a conviction on the part of Mr. Ward that if it were done it would prevent that alternate expansion and

contraction of the air within, on which so much of the success of the experiment appeared to depend.

The result of other experiments made by Mr. Yates, one of the "Committee appointed for making experiments on the growth of plants under glass, and without free communication with the outward air," is also very interesting. In 1837 he thus writes:—

Nearly a year ago I planted *Lycopodium dentatum* in a chemical preparation-glass, with a ground stopper. During that time the bottle has never been opened. The *Lycopodium* continues perfectly healthy, and has grown very much, although for want of space the form of the plant is distorted. Seeds, which happened to be in the soil, have germinated, and *Marchantia* has grown of itself within the glass. I also obtained a hollow glass globe, of eighteen inches' diameter, and with an aperture sufficient to admit my hand for planting the specimens. A variety of ferns and lycopodiums were then set in the soil, which was properly moistened with water. This having been done, the aperture was covered with sheet India-rubber, which was every day forced, either outwards, as the air within the glass was heated and expanded, or inwards in the reverse circumstances. These ferns grew probably as well as they would have done in a greenhouse or hothouse. They were all foreign, and some of them requiring a great heat. Several have ripened seed.

Mr. Yates also mentions the erection of a greenhouse in the yard of the Mechanics' Institute, Mount-street, Liverpool, for the purpose of affording a specimen on an enlarged scale, to be exhibited at the meeting of the British Association in that city. It was stocked with foreign plants of all kinds, and was not provided with any means for the application of artificial heat. The plants flourished perfectly well, many of them flowered, and some ripened seed.

Another series of experiments was undertaken by Dr. Daubeney. During the month of April, 1837, he introduced a considerable number of living plants into glass globes, having only a single aperture through which the air could circulate, and that one covered over by a sound piece of bladder, closely attached to the edges of the glass, so as to preclude the possibility of any air entering the vessel, except through the membrane itself. The plants, which consisted of anemones, primroses, lobelias, speedwell, &c., were allowed to remain undisturbed for ten days, at the end of which time they appeared healthy, and had grown considerably: some even had flowered since their introduction. The air contained in the jars was then examined during the day, and found to contain in the first jar 4 per cent. of oxygen more than the proportion present in atmospheric air; in the second jar $1\frac{1}{2}$ per cent. more; in the third jar 2 per cent. more. The amount of oxygen was found to be on the decrease in successive examinations, and at length, on June 20th, of the same year, No. 1 was found to contain $2\frac{1}{2}$ per cent. less of oxygen than that in atmospheric air; No. 2, $3\frac{1}{2}$ less; No. 3, 4 per cent. less. Even then there was sufficient aerial circulation to sustain the vitality of the plants, though they were less vigorous and healthy.

Mr. Ward considers the change of air produced by alternate expansion and contraction, which is regulated by heat, as being exactly proportioned to the increased wants of plants grown in this manner, arising from their greater excitement. Vascular require a greater change of air than cellular plants, and this is effected by surrounding them with a larger volume. It is of great importance that light be freely admitted to all parts of the growing plant, for it is thus assisted in developing its flowers, and enduring cold.

The air in these cases is in a perfectly quiet condition, and therefore the plants will bear variations of temperature, which in ordinary circumstances would prove fatal to them. Australian and Cape plants are found to bear the cold of our climate in this way without injury, and some of the inhabitants of cold regions may, in the same manner, be reared in our sunny apartments, being sur-

rounded with a protecting atmosphere of their own creation. Mr. Ward gives a striking illustration of this ability in inclosed plants to bear changes of temperature. A case of plants, brought by Captain Mallard, from New Holland, was prepared in the month of February, at which time the thermometer stood 94° in the shade. In rounding Cape Horn, two months subsequently, the thermometer fell to 20° : a month after this, in the harbour at Rio, it rose again to 100° : in crossing the line, the thermometer attained 120° , and fell to 40° on their arrival in the British Channel in November, eight months after they were inclosed. These plants were taken out in the most healthy condition.

By means of the glass case we are able to surround our plants with an atmosphere of any required humidity, and thus we may now, in the heart of cities, have our drawing-room tables adorned with growing specimens of choice and beautiful flowers, or if we prefer it, with the lovely, though humble, denizens of our woods and forests.

ON THE PERCEPTION OF PAIN.

UNHEALTHY people depend far too much on the druggist's shop. This perhaps would not be, if it were recollected, as it ought to be, that the pain and disagreeableness of ill-health result from our perception of these things, and not from the things themselves. Those who go into battles know that in the heat of conflict men receive the most serious and painful wounds, which they do not so much as find out until the hurry and excitement of the fight are over. Now, one half of the ill-health which annoys people in the atmosphere of London, and with London habits, is just of that kind from the perception of which they might escape. I am no doctor in the pulse-feeling and tongue-inspecting signification of the word; but I have reason to believe that the most intelligent among my very esteemed friends who practise the healing art are very well aware of the great importance of turning away the attention of the patient from his or her malady, be it real or only imagined. Medical folks who understand mankind morally as well as physically, are, I believe, far less solicitous than some people think, to make out positively and certainly whether such or such a disease does really exist, or only the imagination of it. In the first place, (I speak, however, with the utmost deference to more erudite judgment,) it is in very many of the cases which come before medical men absolutely impossible to tell what is really the matter *physically*. Some diseases there are of which the symptoms are quite decisive, and not to be mistaken; but of by far the greater number of cases of ill-health, the physical cause must remain in considerable doubt. The chief good which we then derive from the doctor, is a moral good: we submit ourselves to authority and to discipline; we feel that we are taking rational steps towards ridding us of the evil which oppresses us; and we are, for the most part, inspired with hope, not to say confidence, by the sensible and encouraging words which the physician speaks.

But there are thousands upon thousands who do not think themselves quite ill enough to call in the doctor, and yet go on from week to week, from month to month, and from year to year, continually ailing, and continually sending to the elegant shop with plate-glass windows filled with glass jars of various coloured physic, (especially crimson,) as if sick people were as silly as mackerel, and very liable to be taken with the same colour of bait. Now it is for these people that I would presume to prescribe. What they want is not so much physic as diversion. How many are there who, while they are at home, moping about with dull companions, or no companions at all, feel pains in the shoulders and in the back and in the chest—have dizziness in the head—black things floating before the eyes—sudden startings and twinges, and so on; how many are there tormented thus, who, when some brisk and lively and intelligent friend appears, capable of rousing the attention and setting the spirits in a glow, actually forget their complaints, and feel that for that evening or morning, as the case may be, they are uncommonly well? Now these persons, instead of taking "black draught," as they very commonly do, (for the pretty colours in the druggist's front-window are by no means common to his nauseous stock,) should take some far less melancholy medicine. It should not be material physic, but a wholesome, cheerful philosophy.—*The Table Talker*.

HAS THE MOON ANY INFLUENCE ON PLANTS AND ANIMALS?

AN inquiry whether the moon exerts any influence on organized beings is not less interesting than a similar investigation of her influence on the weather. Gardeners and agriculturists have a strong faith in the existence of such influence, and it is right that the tenability of the opinion should be gradually tested.

The gardeners in the neighbourhood of Paris apply the name of the "frosty moon" to the lunation, which, commencing in April, becomes full in the early part of May. They assert that the light of this moon exerts an unfavourable influence on the young shoots of plants; that, during a clear night, the leaves and buds exposed to this "frosty moon" become, in some measure, blighted by frost, although the temperature of the air may be many degrees above the freezing-point; and that if the night be cloudy, so that the moon's rays cannot reach the plants, the bad effect does not take place, although the temperature may be the same as before. Many of the scientific men of Paris have laughed at these notions, but Arago shows that they may not be altogether unreasonable. Dr. Wells, some years ago, demonstrated that, through the radiation of heat, a plant may be during the night many degrees colder than the surrounding air: if the sky be clear, this difference may amount to 10° or 12° Fahrenheit, but if cloudy, the difference becomes little or nothing. Now it is known that in the month of April and the beginning of May, the temperature at night is frequently only 6° or 8° above the freezing-point, and the plants may thus become frosty on the principle which produces dew and hoar-frost in other cases. Arago says that, by viewing the matter in this light we may agree with the Paris gardeners as to the fact, though the moon's action has nothing to do with it.

"Trees ought to be cut down during the wane of the moon, if we wish the wood to be of good quality and durable." This is a favourite maxim of foresters, and was formerly so strongly believed in France, that a law was passed to ensure attention to it in the royal forests. The same opinion prevails in many other countries. Sauer, a German agriculturist, after expressing his belief in the fact, explains it by saying that the sap rises in a plant more abundantly during the first than the second half of a lunation, and that consequently, if the tree be cut before full moon, the wood will be spongy, easily assailable by worms, slow in drying, and not durable. Arago remarks that, *if true*, nothing in science would be more remarkable than the increase of sap at a particular part of the moon's age. It does not appear that Sauer made any experiments to support his assertion, and he meets with but little support from other quarters, for M. Duhamel de Monceau cut down a great many trees of the same age, situated in the same field, and under precisely similar circumstances: on comparing the wood of these trees, he could not perceive that the trees cut down during the wane yielded wood differing in any respect whatever from those cut during the moon's increase.

Some gardeners maintain that if you wish to have cabbages and lettuces which will shoot; if you want double flowers, or trees which shall give early fruit, you must sow, plant, and cut during the increase of the moon. The only attempt at explanation which we have ever seen, in support of this fanciful opinion, is that of Montanari, who says:—"During the day the solar heat augments the quantity of sap which circulates in plants, by increasing the diameter of the tubes through which it flows. The cold of night produces an opposite effect. Now at the time of sun-set the moon, if not yet full, is above the horizon, and therefore lessens the cooling effect resulting from the disappearance of the sun. During the wane, on the contrary, the moon often does not rise till some hours after sun-set, that is, till the cool-

ing of the organs of the plants has produced its full effect." This explanation is full of objections, but it will suffice to say that a calculation on the heating effects of the moon's rays is quite inadmissible. These maxims appear quite as insupportable as that of Pliny, that we should sow beans at full moon, and lentils at new moon. No fair experiments have proved the maxims to be true.

Pliny observes that if we wish to gather grain for the market, we should do so at full moon, because the grain augments considerably in size during the increase of the moon. The first objection to this statement is, that we are deficient in proof of its correctness, and the next is, that, supposing it to be correct, it would be much more rational, as Arago remarks, to seek for the explanation in the slight increase of rain which seems to take place just before full moon, rather than in any direct influence of the moon.

The Italian vine-dressers maintain that wine which is made at the latter end of one lunation and the beginning of another is never so good as that which is begun and completed during one lunation. Toaldi explains it thus. "The vinous fermentation never embraces parts of two lunations except when it commences just before new moon; and as the moon then has her enlightened hemisphere turned away from the earth, the atmospheric temperature ought to be at its minimum, and it is well known that fermentation is less active when the temperature is low." Here is the same fallacy as before, in attributing a positive heating effect to the moon's rays, for it has been proved that the moon does not elevate a thermometer so much as $\frac{1}{10}$ of a degree in temperature, a quantity quite insignificant for all practical purposes. The vine-dressers of Italy also tell us that wine ought not to be bottled in January and March, except during the wane of the moon, as it would otherwise be spoiled. Fortunately we are spared the trouble of confuting this dogma, for Pliny tells us just the reverse: he instructs us not to bottle or clarify wine except when the moon is seven days old, that is, when she is increasing. We may therefore safely leave these opposite opinions without an attempt to examine into their truth.

Upon the whole, M. Arago, a man peculiarly fitted to form an opinion on these subjects, thinks that of all the maxims and dogmas respecting the influence of the moon on plants, the greater part are *not true*, and that those which appear to be matters of fact are caused by some other circumstances, and not by the direct influence of the moon.

Almost as many opinions have been formed of the moon's influence on animal bodies as on plants. It is said that the moon's rays darken the complexion. Supposing that the skin does become darkened by long-continued exposure in clear nights, there are two ways of considering the question. Up to a very recent period no substance was known to the scientific chemist, the colour of which was at all affected by moonlight. Recent discoveries in photography enable us now to produce compounds so extremely sensitive to the action of light that their colour is affected by long exposure to moonlight. It is, however, very difficult to see how the lunar rays can change the complexion. When we receive upon the body the light of the moon, the sky is clear: when the sky is clear, heat radiates from animal bodies in the same way as from plants, for we should find that on two nights, the one clear and the other cloudy, when the thermometer indicated the same temperature, the clear night would feel colder to us than the cloudy. Although the animal heat would prevent the cooling of the skin by radiation from going on to too great an extent,—although, for instance, it might not permit hoar-frost to form on the skin,—yet there is reason to believe that a cooling of the skin does take place under these circumstances, and Arago asks, "Who would venture to affirm that the physical condition in which the skin is placed by a very intense local coldness, would

not alter its texture nor modify its tint?" He is willing to accept the fact that the skin is apt to change its tint in a clear night, but he would attribute it to the radiation of heat, and not to any influence of the moon.

Pliny and other ancient naturalists stated that the moon spreads an abundant moisture on all bodies which receive its light, and that this light hastens the putrefaction of animal substances. The same opinions extensively prevail at the present day in the West Indies. Without charging the moon with being the cause of these phenomena, it is not difficult to account for them by referring them to dew. When the moon shines brilliantly, the sky is clear: when the sky is clear, heat radiates from bodies at the earth's surface: when this radiation occurs, a portion of the aqueous vapour suspended in the air becomes condensed, and settles on the cold body in the form of dew or moisture; and as animal substances putrefy more readily when wet than when dry, this dewy moisture would hasten the process. Hence it is perfectly possible to believe that animal substances putrefy more quickly in the moon's light than in a cloudy night, without looking for the cause in any particular action of the lunar rays.

Some of the ancients assert that lobsters, oysters, and some other kinds of fish, are larger during the increase of the moon than during the wane. The Academicians del Cimento at Florence professed to inquire into this matter, and, admitting the fact, attributed it to the aid which the light of the moon gave to the fish in seeking their food. It has been well observed, however, that exactly as much light from the moon falls on the earth or sea from new to full as from full to new, and therefore the above difference could not exist if the lunar rays produced the effect. Moreover, Rohault asserts, from careful observation, that there is no evidence of the fact itself; that there is no such difference in the sizes of the fish caught at these different periods.

Sanctorius once asserted that a man weighs one or two pounds more at the commencement of a lunation than towards the latter end, and he states that he found it true in himself. We may pretty safely assert that horsemen, sportsmen, and others who are accustomed to be weighed frequently, would be well acquainted with such a fact if it were true. In the absence of such evidence credence is impossible. The butchers of France, and perhaps of other countries, used to entertain the opinion that there is more marrow in the bones of animals at one period of the moon's age than at others, but Rohault, after more than twenty years' observation, found that there was not the slightest ground for such an assertion.

A great many isolated circumstances have been recorded, having for their object to show that human maladies are influenced by the phases and eclipses of the moon. Dr. Mead mentions an instance of a child who always had convulsions at the moment of full moon. Pison speaks of a man who had an attack of paralysis every new moon. Menuret has recorded an instance where epilepsy came on at full moon. Gall is said to have observed that weak and feeble persons are more irritable at two periods of the lunar month than at other times. Faber tells us that when a lunar eclipse took place, a maniac was found to become additionally furious, to arm himself with a sword, and to strike all who came within his reach. Ramazzini reports that the persons attacked with an epidemic fever which raged throughout Italy in the year 1693, perished in great number on the 21st of January, the day of a lunar eclipse. Vallisneri says that, being at Padua, recovering from a long illness, he was attacked with unusual feebleness and trembling on the day of a solar eclipse, and when, consequently, the moon was between the earth and the sun.

Now although it would not be right to give a denial to all these statements, yet there are two or three circumstances which should be borne in mind in estimating the

probability of truth. We all know the effect of imagination in increasing the maladies of the human frame; and we are all aware of the undefined feeling of dread and awe experienced by many persons at the mention of an eclipse. That the imagination, urged by this dread and awe, should affect the frame, and bring on certain disordered symptoms, is fairly within the bounds of probability. If a person of a weak and superstitious turn of mind should be told, and should believe, that he would die on a certain day, it is not improbable that his death would really be brought on, or at least hastened, by the effect of imagination on the human frame. And so it is likely to be in other cases. It is also worthy of remark that the observations recorded by physicians have seldom been long continued, so that we have no means of judging whether the phenomena occurred uniformly for years.

As far as present observations go, there does not seem any evident reason why the moon should affect either plants or animals, but still it would be rash to say that such affection does not take place. Multiplied observations, for a long series of years, are required before we shall properly understand the subject. Meanwhile it is well to bear in mind the reply of an ancient philosopher, who, when he was asked, "Why is it that foals who have been chased by a wolf become better runners than other foals?" answered, "Why because, perhaps, it is not true!" We must be quite certain of the accuracy of the facts before we draw conclusions.

On some future occasion we may probably return to this subject, and collect the opinions and superstitions of the philosophers, the natural historians, the poets and the wise men of the olden time, on the action of the moon on organized beings. The subject has both its interest and its moral. These fancies and superstitions may be amusing enough to those who live in the present enlightened age, but they probably form a remnant of that idolatry which excited the anger of the Almighty against His chosen people when "He turned and gave them up to worship the host of heaven."—Acts vii. 42.

If I looked upon the frame of society only with the eye of an artist, if I cared not what became of human government, or the human character, or anything else human, I should be compelled to see and admit that there is no basis for human welfare, individual, social, or national, none conceivable or possible, none provided by the great Framers of the World, but intelligence and virtue.—DUNY.

WEEP not, sad moralist! o'er desert plains,
Strewed with the wrecks of grandeur—mouldering fanes,
Arches of triumph, long with weeds o'ergrown,
And regal cities, now the serpent's own;—
Earth has more awful ruins—one lost mind,
Whose star is quenched, hath lessons for mankind
Of deeper import than each prostrate dome,
Mingling its ashes with the dust of Rome.—MRS. HEMANS.

AN ELEPHANT'S PULSE.

THERE chanced to be a female elephant and her calf stationed not far from my tent. I carried the young one a large basin of sweet tea, after breakfast one morning, into which he dipped his trunk, and drained the contents in an instant; and, perceiving his mamma looking on wistfully, I procured her one also, which she drank with much gusto. Soon after this introduction we became great friends, and the mother and her son were regular pensioners of my teapot; the lady permitting me to take many liberties with her, such as toying with her delicate ear, scratching her neck, &c., and giving me now and then a hug about the waist with her trunk, which in no instance exceeded the reasonable bounds of a friendly embrace. One morning when she was particularly affectionate, I took a fancy to feel her pulse: and, when handling her ear, I groped for an artery at the base, and noted the number of pulsations in a minute, which was twenty-four—and I need scarcely add that there was no want of strength.—FORBES' Ceylon.

COMMERCIAL HISTORY OF CURRANTS AND RAISINS. I.

It is perhaps not generally known that the two kinds of fruit which form part of the ingredients of a "Christmas pudding" are nothing more than different varieties of the *grape*, dried previous to the exportation. The terms *currants* and *plums*, as applied to the dried fruits sold by the grocer, are rather ill-chosen, for those names have been long given to two well-known kinds of fresh fruit, cultivated in England, and very different from the similarly named dried fruits.

Dried currants are a species of grape grown in Zante and other of the Ionian Islands, and likewise in the southern parts of Greece. Sir George Wheeler, who travelled in Greece a hundred and sixty years ago, gave what was probably the first correct account of their growth and preparation. He states that their name was borrowed from the city of Corinth, where they were first cultivated, and from which they obtained their Latin appellation, *Uva Corinthiaca*, or grapes of Corinth, afterwards changed to currant. He says:—

They grow not upon bushes, like our red and white currants, as is vulgarly thought, but upon vines, like other grapes; only their leaf is something bigger, and the grape much smaller than others. They are also without stones; and in those parts are only red, or rather black. But when I passed Piacenza in Italy, I saw white ones of this kind, only differing in colour.

He proceeds to describe the mode in which the fruit was, in his day, prepared for exportation. The grapes, being ripe by about the month of August, were gathered and placed in a thin layer on the ground, where they were left till dried. They were then gathered up, cleaned, brought into the town, and put into warehouses called *seraglios*; into which they were poured through a hole above, till the warehouse was completely filled. The currants, by their own weight when thus accumulated in a large quantity, caked so closely together as to require digging out with sharp instruments, when about to be barrelled for exportation. A very primitive mode was adopted for pressing the currants into barrels, viz., by a man, who, getting into the barrel with bare legs and feet, trampled down the fruit as fast as it was laded in. In 1680, the island of Zante bore enough of this fruit yearly to load five or six vessels; Cephalonia three or four; Nathaligo, Messalongha, and Patras, one. The English had a small factory at Zante, and the French and the Dutch had consuls, to regulate the trade with their respective countries. Sir George Wheeler adds quaintly:—

The English have the chief trade here; and good reason they should, for I believe they eat six times as much of their fruit, as both France and Holland do. The Zantiotes have not long known what we do with them; but have been persuaded that we use them only to dye cloth with; and are yet strangers to the luxury of Christmas pies, plum-pottage, cake, and puddings, &c.

The same islands which supplied us with currants in 1680, do so at the present day; but the visits of more recent travellers enable us to give a somewhat more complete account of the cultivation and commerce of this article. The species of vine which produces this fruit is of a small size and delicate nature, requiring much care and attention during its growth. Six or seven years elapse after a plantation has been formed, before the vines yield a crop of grapes. The plants grow low, and are supported by sticks. In the beginning of October the earth about the roots of each plant is loosened and gathered up in small heaps, away from the vine. The operation of pruning is performed in March; after which the ground is again laid down smooth around the plant. The crops are liable to injury in Spring from the blight called the *brina*; and rainy weather in the harvest season produces great mischief. The gathering, as before observed, takes place about August or September.

ber, and the time required for the drying of the currants is from a fortnight to three weeks, according to the state of the weather. If a heavy shower or a thunder-storm should occur during this interval, (which is not unfrequently the case,) the drying is not only retarded, but is often superseded by fermentation; in which case the fruit is fit only to be given to animals. When the currants are deposited in the seraglio or warehouse, a paper is given to the grower by the *seragliente* or warehouse-keeper, acknowledging the receipt of the quantity delivered; this paper passes currently in exchange from hand to hand till the time of export.

Mr. Macculloch gives many details, which tend to show how oppressive have been the enactments relating to the currant trade, in the Ionian Islands, both when they were under Venetian government, and since they have been placed under British protection. Under the control of the Venetian authorities, five persons, chosen out of the council of nobles, assembled in presence of the *proveditore*, or governor, regulated the price at which currants should be sold; and those who wished to purchase were under the necessity of declaring to the Government the quantity which they were desirous of purchasing. This system was called the *collegetto*. The export duties consisted of an original duty of nine per cent. *ad valorem*, that is, nine per cent. on the value of the currants; a *dazio fisso*, or fixed duty of about four shillings and four-pence per hundredweight; and afterwards of a *novissimo*, or more recent duty, of two shillings and two-pence per hundredweight. This latter portion of duty was remitted in favour of vessels bringing salt-fish, &c., from the northern ports, (chiefly English, Danes, and Dutch;) and it was afterwards relaxed in favour of Russian vessels from Odessa, and ultimately abandoned altogether as being vexatious and unproductive. The *proveditore* received in addition two per cent., and each of his two Venetian councillors one per cent.; so that the fruit, the original cost of which was about nine shillings the hundredweight, cost the exporter very little less than eighteen or nineteen shillings.

But these duties are small, compared with those which the consumers of currants in England have paid since the Ionian Islands came under British rule. The fruit, which at one time brought as much as thirty or thirty-two shillings the hundredweight, had declined in 1832 to eight shillings; but it remained still subject to the Zantiote *dazio fisso*, or fixed duty, of four shillings and four-pence, besides an *ad valorem* duty of six per cent., being together equivalent to a duty of nearly sixty per cent. at that time. Thus much for the Zantiote duties. Meanwhile the British parliament raised the *import* duties, payable when the currants arrived in England, to the enormous amount of forty-four shillings and four-pence per hundredweight, being five times as much as the real value of the currants at that time. The consequences of this most unreasonable duty were soon found to be most disastrous to the currant growers of the Ionian Islands. A decline took place in the culture of the plant, as well as in the circumstances of the proprietors, whose staple export and means of existence were almost annihilated. As the prices fell, and the distress became greater, the necessitous grower was obliged to borrow money at a ruinous interest from foreign merchants, or from the Jews, who were consequently able to dictate the price at which they would take his produce. Still, however, notwithstanding the largeness of the duties, the entries of currants for home consumption amounted, at an average of the years 1829, 1830, and 1831, to nearly a hundred and thirty thousand hundredweight per year, producing a revenue which amounted to nearly three hundred thousand pounds sterling, a fact which has often been adduced to show that the taste for this kind of fruit is both deeply rooted and widely diffused in England.

The British parliament, finding, from the complaints

of the merchants and growers, how injurious the high duties were to this branch of culture, adopted a legislative enactment in the year 1833, by which the whole of the duties upon currants were commuted for an *ad valorem* tax of nineteen and a half per cent., being the same as that laid upon olive-oil, another important product of the Ionian Islands. The good effects of this enactment were manifested by an almost instantaneous rise in the price of the fruit which had remained on hand of the crop of 1832. It has been calculated that the average quantity of currants produced during the four years ending with 1832, was 19,686,800 lbs. per annum; of which 17,885,300 lbs. were exported from the Ionian Islands, and the remainder consumed by the islanders themselves.

The origin of the name *currants*, as applied to these diminutive grapes, may be pretty clearly seen by comparing the appellations given to them on the Continent.

In *Latin*, they are *Uvæ Corinthiacæ*, or *Passulæ Corinthiacæ*; in *French*, Raisins de Corinthe; in *Italian*, Uve passe di Corinto; in *Spanish*, Pasas de Corinto; in *German*, Korinthen; in *Russian*, Korinka, or Opook. "*Corinth*" is evidently the source whence these appellations were derived.

SPARE MINUTES.

MEDITATED RESOLVES, AND RESOLVED MEDITATIONS.

III.

HAD I not more confidence in the truth of my Saviour, than in the traditions of men, poverty might stagger my faith, and bring my thoughts into a perplexed purgatory. Wherein are the poor blessed, if pardon shall be purchased only by expense? Or how is it hard for a rich man to enter into Heaven, if money may buy out the past, present, and future sins of himself, his deceased and succeeding progeny? If Heaven be thus sold, what benefit has my poverty, by the price already paid? I find no happiness in room on earth. It is happiness for me to have room in Heaven.

THERE is no estate of life so happy in this world, as to yield a Christian the perfection of content; and yet there is no state of life so wretched in this world, but a Christian must be content with it. Though I can have nothing here that may give me true content, yet I will learn to be truly contented here with what I have. What care I though I have not much; I have as much as I desire, if I have as much as I want; I have as much as the most, if I have as much as I desire.

It is the greatest of all sins always to continue in sin. For where the custom of sinning waxeth greater, the conscience for sin grows the less: it is easier to quench a spark than a fire; I had rather break the cockatrice's egg, than kill the serpent.

NATURE bids me love myself and hate all that hurt me, reason bids me love my friends and hate those that envy me, religion bids me love all and hate none. Nature sheweth care, reason wit, religion love. Nature may induce me, reason persuade me, but religion shall rule me. I will hearken to nature in much, to reason in more, to religion in all. Nature shall make me careful of myself, but hateful to none; reason shall make me wise for myself, but harmless to all; religion shall make me loving to all, but not careless of myself. I may hear the former, I will hearken only to the latter. I subscribe to some things in all, to all things in religion.

ABUNDANCE is a trouble, want a misery, honour a burthen baseness a scorn, advancements dangerous, disgrace odious. Only a competent estate yields the quiet of content. I will not climb, lest I fall, nor lie on the ground, lest I am trod on. I am safest while my legs bear me. A competent heat is most healthful for my body, I would desire neither to freeze nor to burn.

[ARTHUR WARWICK. 1637.]

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